

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-026795**Date Inspected:** 01-Dec-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** Pat Swain**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Sections**Summary of Items Observed:**

This Quality Assurance (QA) Inspector, Craig Hager was on site at the job site between the times noted above. This QA Inspector was on site to randomly observe Quality Control (QC) personnel perform Non-Destructive Testing (NDT) and monitor American Bridge/Fluor (ABF) welding operations. This Quality Assurance (QA) Inspector, Craig Hager observed the following.

SAS – Tower – F.W. Spencer:

This QA Inspector observed that F.W. Spencer did not appear to be onsite this shift. This QA Inspector had a conversation with QC Inspector Steve Jensen regarding F.W. Spencer this morning at approximately 0800 hours and concurred that they were not on site and if observed he would notify this QA Inspector. At the end of the shift this date this QA Inspector and QC Inspector Steve Jensen had not observed F.W. Spencer on site this date.

West Jacking Saddle – Frame-Repair: This QA Inspector was presented a Request For Weld Repair Approval, number 201111-003 which appeared to be for the West jacking Saddle Frame. This QA Inspector reviewed the documents and meet with QC Inspector Bernard Docena and ABF welding personnel Rick Clayborn (#2773) at the West Jacking Saddle. This QA Inspector was previously informed by Lead QA Inspector Danny Reyes that ABF had approval to proceed with the excavation of the weld repair in accordance with the request identified above. This QA Inspector observed QC Inspector Bernard Docena mark out areas for additional excavations at both ends of the existing excavation. This QA Inspector observed a 50 mm long mark on the left side centered with the existing excavation. This QA Inspector observed a 50 mm mark on the right side was at a 45 degree upwards angle. This QA Inspector notified QC Inspector Bernard Docena the mark on the left appeared to

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coincide with the photograph and verbiage in the repair document, but that the mark on the right did not. This QA Inspector stated the proposed area in the document appeared to be at a 90 degree angle from the existing excavation extending upwards. This QA Inspector suggested the location on the right side be confirmed by Lead QC Inspector Bonifacioi Daquinag Jr. This QA Inspector, QC Inspector Bernard Docena, Lead QC Inspector Bonifacioi Daquinag Jr., Quality Control Manager (QCM) Jim Bowers, Structural Material Representative (SMR) Kittric Guest and QA Inspector Robert Mertz met at the West Jacking Saddle. This QA Inspector was informed by QCM Jim Bowers the additional excavation area on the right side was to be at a 90 degree angle and extend upwards. This QA Inspector observed the location of the mark was corrected. This QA Inspector observed ABF welding personnel Rick Clayborn (#2773) use the carbon arc process to perform the excavations as marked. This QA Inspector observed QC Inspector Pat Swain perform a visual and Magnetic Particle Testing (MT) inspection on the excavation areas. QC Inspector Pat Swain informed this QA Inspector no crack like indications were observed at either end of the excavation. This QA Inspector performed a visual verification and observed the effective weld throat (depth of weld metal) at the end of the additional 50 mm excavation on the left appeared to be approximately 6 mm. This QA Inspector observed Caltrans Engineer Doug Wright was present and notified him of the observation. Caltrans Engineer Doug Wright stated the effective throat needed to be approximately 14 mm and that the excavation should be lengthened. ABF Superintendent Scott Smith was present and confirmed with Caltrans Engineer Doug Wright an additional 25 mm of length would be added to the 50 mm length from the existing excavation for a total of 75 mm on the left side. This QA Inspector observed ABF welding personnel Rick Clayborn use the carbon arc process to excavate and additional length of 25 mm. This QA Inspector observed the depth of the excavation appeared to be approximately 6-7 mm. This QA Inspector observed QC Inspector Pat Swain perform a visual and MT inspection on the excavation. This QA Inspector observed a broad MT indication approximately 2 mm from the surface of the existing weld face. This MT indication was produced using an AC powered MT Yoke which is for surface indications only. The MT indications implied the effective throat of the weld was decreasing rather than increasing as the excavation length increased. This QA Inspector, ABF Superintendent Scott Smith and QC Inspector Pat Swain were informed by Caltrans Engineer Doug Wright that no additional work should be performed at this time and that the issue would be addressed as soon as possible. This QA Inspector notified Lead QA Inspector Danny Reyes of the observations noted above and was not informed of any additional work to be performed at this location this shift. See photos below of the excavation areas and MT indication.

This QA Inspector and Lead QC Inspector Bonifacioi Daquinag Jr. had a conversation regarding the Welding Procedure Specification (WPS) ABF-WPS-D15-1002-Repair referenced on the repair request. This QA Inspector and Lead QC Inspector Bonifacioi Daquinag Jr. observed QC Inspector Bernard Docena confirm the welding of the excavation was in the vertical position by using a level and protractor. This QA Inspector observed QC Inspector Pat Swain perform a MT inspection on the face of the weld as far back as accessible (approximately 150 mm) from the left side of the excavation and was informed that no indications were present.

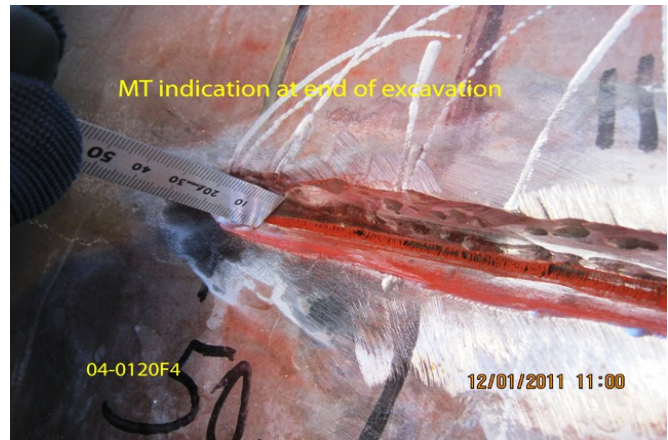
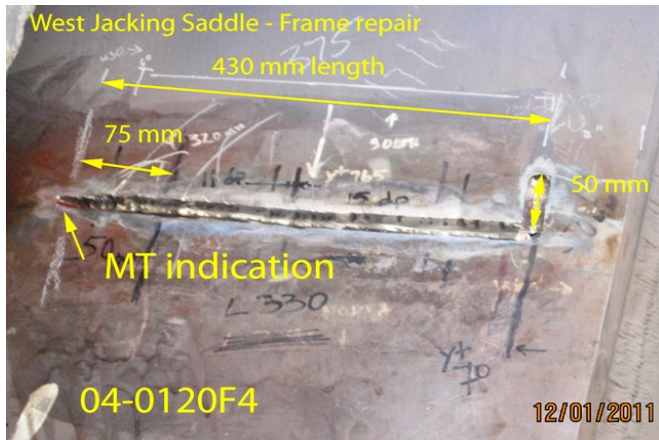
This QA Inspector verbally informed QA SPCM Lead Inspector, Daniel Reyes, of the issues noted in this report for compliance therefore for further details of issues of significance see QA SPCM Lead Inspector, Daniel Reyes, Daily Inspection Report (6031) for this date.

Summary of Conversations:

This QA Inspector had general conversations with American Bridge/Fluor (ABF) and Caltrans personnel during this shift. Except as described above and noted above there were no notable conversations.

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Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

Inspected By: Hager, Craig

Quality Assurance Inspector

Reviewed By: Levell, Bill

QA Reviewer